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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/038,451	01/03/2002	Masaya Okita	Soyu C4B	8378	
7590	04/28/2010	EXAMINER			
Flynn, Thiel, Boutell & Tanis, P.C. 2026 Rambling Road Kalamazoo, MI 49008-1699				KUMAR, SRILAKSHMI K	
ART UNIT		PAPER NUMBER			
2629					
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04/28/2010		PAPER			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/038,451	OKITA, MASAYA	
	Examiner	Art Unit	
	SRLAKSHMI K. KUMAR	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 18 February 2010.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 38-41 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 38-41 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

The following office action is in response to the request for continued examination, filed on 2/18/2010. Claims 38-41 are pending. Claims 38 and 40 have been amended.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 38, 39 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 38, applicant claims "applying an appropriate voltage...", the term "appropriate" is indefinite as it unclear and ambiguous as to what an appropriate voltage is. Appropriate correction is required.

With respect to claim 39, applicant claims "substantially blacking the liquid crystal panel". The term "substantially" renders the claim indefinite since it is unclear as to whether the liquid crystal panel is blacked or not.

With respect to claim 41, applicant claims "displaying substantial black". The term "substantial" renders the claim indefinite since it is unclear as to whether the liquid crystal display is blacked or not.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al (US 4,795,239) in view of Majima (US 4,938,570).

As to independent claims 38 and 40, Yamashita et al teach a method for driving liquid crystal for a liquid crystal display (11) device having a liquid crystal panel sandwiching liquid crystal between two electrodes that are disposed between two polarizing plates (col. 1, lines 6-11), comprising: applying a voltage (voltage $S1'-Sm'$) corresponding to image data (COM') between the two electrodes and thereby depicting an image on the liquid crystal panel (Fig.1); and applying an appropriate voltage (VITO, a constant voltage) between the two electrodes.

Yamashita et al do not explicitly state where the liquid crystal used in the display is a nematic liquid crystal or wherein the nematic liquid crystal does not change into a different phase. It is well known in the art that the liquid crystal is nematic as is the most common. Further, Majima teach using nematic liquid crystal in col. 4, lines 44-45 and where the LC does not change phase. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a nematic liquid crystal as taught by Majima into the LCD system of Yamashita et al in order for proper excitation of the liquid crystal, and where nematic liquid crystal is advantageous as it has the optical properties of a uniaxial crystal.

Yamashita et al do not teach where the appropriate voltage is applied in each frame period, and thereby erasing the image depicted by the voltage corresponding to the image data on the liquid crystal panel within the same frame period. Majima teach the application of an appropriate voltage in each frame period in col. 2, lines 49-68, and col. 5, lines 43-52. Majima

teaches an erasure voltage that erases the image displayed in col. 5, lines 43-52. It would have been obvious to one of ordinary skill in the art to include where the appropriate voltage is applied in each frame period in order to have smaller time periods for the driving to improve timing and display quality, and further to include where the appropriate voltage erases the image in each frame as taught by Majima into the liquid crystal display of Yamashita et al in order for improving uniformity of the display and images.

As to dependent claims 39 and 41, limitations of claim 38, and further comprising, Majima teach wherein erasure of the image in each frame period is affected by substantially blacking the liquid crystal panel (col. 5, lines 43-52, where a full erasure is performed, thus constituting blacking the liquid crystal panel).

Response to Arguments

3. Applicant's arguments filed February 18, 2010 have been fully considered but they are not persuasive.

Applicant argues the prior art of Yamashita do not teach sandwiching nematic liquid crystal between the two electrodes. Examiner, respectfully, agrees. The prior art of Majima teaches the use of nematic liquid crystal sandwiched between two electrodes. Applicant argues where the prior art of Majima do not teach a nematic liquid crystal, however since the liquid crystal is a thermal liquid crystal, depending on temperature the LC will be of a different phase, such as from smectic to nematic. Thus, Majima teaches the nematic LC. The use of the nematic LC is advantageous as it has the optical properties of a uniaxial crystal. Applicant argues where Majima does not teach a complete erasure. Examiner respectfully, disagrees. Majima teaches erasing in col. 5, lines 43-52. Applicant argues where this erasure is not for each time period,

however, Majima does not teach where the erasure is not for each time period. Majima specifically teaches a full erasure for the frame period as claimed. The prior art of Majima must erase the previous image prior to a new image for the display.

Applicant is also directed to the 35 USC 112, second paragraph rejection above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to 3 whose telephone number is (571)272-7769. The examiner can normally be reached on 7:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Lefkowitz can be reached on 571 272 3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Srilakshmi K Kumar/
Primary Examiner
Art Unit 2629

Application/Control Number:
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Art Unit: 2629

Page 6

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